

Attorney Docket No.
COE-566

PATENT APPLICATION
Serial No. 10/715,430

REMARKS

Applicants appreciate Examiner's thorough review of the application. The full claim set as amended in previous responses has been included for Examiner's convenience in reviewing this response. Applicants have amended Claims 1, 3, and 5, herein. No new material has been added. Reconsideration of the application is respectfully requested.

To assist in reviewing Applicants' response: where Applicants have quoted Examiner's office action, the quoted material is single-spaced and indented and Applicants' response to Examiner's concerns is in bold print.

Under "Claim Rejections – 35 U.S.C. 103" of the office action, Examiner quotes 35 U.S.C. § 103(a) and states:

Claims 1-3, 5, 6, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlander (U. S. patent no. 2,036, 123) in view of Borland (U. S. patent no. 5,369,926).

As to claim 1, DAHLANDER discloses a method of implementing a barrier (3) to fluid flow in at least one direction, said barrier comprising:

placing a first layer of concrete;

applying at least one layer of adhesive material (4) to the top surface of said first layer of concrete, said at least one layer of said adhesive material (4) to include a topmost layer of said adhesive material (4);

placing multiple panels (sheet metal strips 10, 10...) incorporating at least one layer of non-porous material (metal, see page 1, second column, lines 14-26) upon said topmost layer of said adhesive material (4),

overlapping edges of said panels (10, 10...) with edges of any said panels (10, 10...) placed adjacent thereto, wherein said panels (10, 10...) completely cover said topmost layer of said adhesive material (4);

sealing all said overlapped edges (see either Fig. 4 and page 2, first column, lines 7-21 or Fig. 5 and page 2, first column, lines 22-31); and

emplacing at least one flooring structure/wear surface (2) upon said panels (10, 10...) such that said panels (10, 10...) are confined below said flooring structure/wear surface (2) and above said topmost layer of said adhesive material (4),

wherein the step of placing said panels (10, 10...), the step of sealing said overlapped edges of said panels (10, 10...) and the step of emplacing said flooring structure/wear surface (2) second layer of concrete completes implementation of said barrier (3).

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5 DAHLANDER fails to explicitly disclose that the step of emplacing the at least one flooring structure/wear surface includes emplacing a second layer of concrete upon said panels (10, 10...) such that said panels (10, 10...) are confined below said second layer of concrete and above said topmost layer of said adhesive material (4), wherein the step of placing said panels (10, 10...), the step of sealing said overlapped edges of said panels (10, 10...) and the step of emplacing said second layer of concrete completes implementation of said barrier (3).

10 BORLAND discloses a flooring structure having a bottom concrete base deck (10) below a waterproof membrane (20) which may be attached to the concrete base deck (10) and having a topmost concrete wearing slab (50).

15 It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of implementing a barrier to fluid flow in at least one direction of DAHLANDER by making the topmost wear layer be made of concrete as taught by BORLAND in order to provide better wearing characteristics since concrete is a material strong in compression.

20 Applicants respectfully disagree that it would have been obvious to one of ordinary skill in the art to apply the *Borland* method of sealing decking, a method that specifically affords "drainage channels" (Fig. 1) in an insulation layer under the wear layer to achieve the same protection as Applicants' invention. Nonetheless,
25 to further clarify a primary purpose of Applicants' invention, Applicants have amended Claim 1 herein, upon which all remaining claims depend, to indicate that moisture at least will not flow from an earthen surface below concrete flooring onto the top surface of the concrete, not for protection in the opposite direction (from above the wear surface) as provided for by *Borland* in describing a deck design
30 above an at least partially open volume. Further, if one were to use the technique of *Borland* combined with that of *Dahlander*, one would have included the drainage channels of *Borland* in a thick insulation layer for the design. Insulation is not required (nor desired) in Applicants' invention so one of ordinary skill in the art would not have related the two distinctly separate patents of *Dahlander* and *Borland*.

35 Examiner further states:

As to claim 2, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above and DAHLANDER also discloses that said panels comprise non-porous material (sheet metal, preferably copper) selected from a group consisting of: a metal, a metal alloy, a steel

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alloy, a stainless steel, a composite material, a composite material containing at least some metal, and combinations thereof.

Applicants have amended Claim 1 upon which Claim 2 depends to clarify a purpose of Applicants' invention that can not be met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander*, thus mooted any argument regarding Claim 2 as applied to previously amended Claim 1. Further, Applicants are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Examiner further states:

As to claim 3, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above and DAHLANDER also discloses that said barrier (3) employs non-porous material (sheet metal, preferably copper) comprising at least in part a first metal.

Applicants have amended Claim 1 upon which Claim 3 depends to clarify a purpose of Applicants' invention that can not be met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander*, thus mooted any argument regarding Claim 3 as applied to previously amended Claim 1. Claim 3 is also amended herein to simplify the claim language. Further, Applicants are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Examiner further states:

As to claim 6, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above.

Neither DAHLANDER nor BORLAND explicitly disclose that the step of applying said second layer (sic, is) at a thickness of about at least 2.5 cm (1.0 inch).

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F. 2d 459, 105 USPQ 237 (CCPA 1955). (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where (sic, were) held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentability distinguish over the prior art). *In re Rinehart*, 531 F. 2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F. 2d at 1053, 189 USPQ at 148). Further, in *Gardner v. TEC Systems, Inc.*, 725 F. 2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225

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USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made of (sic, to) modify the method of implementing a barrier to fluid of DAHLANDER in view of BORLAND by making the concrete layer be 2.5 cm (1 inch) thick in order to provide a wear surface strong in compression, but relatively thin to save on material cost and since it is well founded that merely changing dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7, 1982).

Applicants have amended Claim 1 upon which Claim 6 depends to clarify a purpose of Applicants' invention that can not be met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander*, thus mooted any argument regarding Claim 6 as applied to previously amended Claim 1. Further, Applicants are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Examiner further states:

As to claim 9, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above and DAHLANDER also discloses that the step of providing said panels as at least one plate.

Neither DAHLANDER nor BORLAND explicitly disclose that the at least one plate has a total thickness less than about 6 mm (0.25 inch).

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F. 2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where (sic, were) held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentability distinguish over the prior art). *In re Rinehart*, 531 F. 2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F. 2d at 1053, 189 USPQ at 148). Further, in *Gardner v. TEC Systems, Inc.*, 725 F. 2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

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5 Therefore, to make the at least one plate have a total thickness less than about 6 mm (.25 inch) would have constituted an obvious expedient to one of ordinary skill in the art at the time the invention was made in order to provide strength, yet save on material costs and since it is well founded that merely changing dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7, 1982).

10 Applicants have amended Claim 1 upon which Claim 9 depends to clarify a purpose of Applicants' invention that can not be met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander*, thus mooted any argument regarding Claim 9 as applied to previously amended Claim 1. Further, Applicants are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Examiner further states:

15 As to claim 12, DAHLANDER discloses the method of claim 1 as discussed above, and DAHLANDER also discloses that (sic) the step of providing the panels as at least one foil.

However, Dahlander fails to explicitly disclose that the at least one foil has a thickness less than about 1 mm (40 mil).

20 However, it is well settled that changes in size and/or proportion between the invention and the prior art do not constitute a patentable difference. See *In re Rose*, 220 F. 2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentability distinguish over the prior art). *In re Rinehart*, 531 F. 2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being soaked up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F. 2d at 1053, 189 USPQ at 148). Further, in *Gardner v. TEC Systems, Inc.*, 725 F. 2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

35 Therefore, to make the at least one plate be a foil (i.e., very thin sheet metal) having a total thickness less than about 1 mm (40 mils) would have constituted an obvious expedient to one of ordinary skill in the art at the time the invention was made in order to be able to provide the waterproofing function, yet remain as thin as possible to save on material costs and since it is well founded that merely changing dimensions is not

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unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*,
216 USPQ 1 (CA 7, 1982)).

Applicants have amended Claim 1 upon which Claim 12 depends to clarify a
purpose of Applicants' invention that can not be met in the cost effective and
straightforward method of Applicants' invention by combining *Borland* with
5 *Dahlander*, thus mooted any argument regarding Claim 12 as applied to previously
amended Claim 1. Further, Applicants are free to utilize the concept of claim
differentiation with each independent claim as Applicants see fit.

For Applicants' invention, the "second (wear) layer" is the same type of
10 material, i.e., concrete, as the first layer. (See, for example, p. 7, lines 15-18).
Applicants' invention provides a monolithic structure and, in addition to serving as
a moisture barrier, Applicants' barrier serves as reinforcing structure to the
monolith, much as a metal screen or rebar does. Further, this reinforcing function
occurs near the top of the monolith at the location where it is most helpful to
15 address external stress on the monolith. This capability is not available in either the
Borland or *Dahlander* patents, alone or in combination.

Under a second section entitled "Claim Rejections – 35 U.S.C. 103" of the office
action, Examiner quotes 35 U.S.C. § 103(a) and states:

20 Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable
over Dahlander (U. S. patent no. 2,036,123) in view of BORLAND
(U. S. patent no. 5,369,926), as applied to Claim 1 above, and further in
view of BEAN ET AL. (United States Patent No. 6,286,279).

As to claim 5, DAHLANDER in view of BORLAND discloses the
method of claim 1 as discussed above.

25 Neither DAHLANDER nor BORLAND explicitly disclose that the
step of employing said adhesive material comprises at least in part a thin
set mortar deposited at a thickness of about 6 mm (0.25 inch).

BEAN ET AL. teach the use of an adhesive layer (18) of a
Portland cement-based adhesive to bond a steel foil (12) to concrete (C).
30 However, BEAN ET AL. do not explicitly disclose that the adhesive layer
is about 6 mm (0.25 inch).

However, it is well settled that changes in size/proportion (i.e.,
dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F.
2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package
35 "of appreciable size and weight requiring handling by a lift truck" where
(sic, were) held unpatentable over prior art lumber packages which could be
lifted by hand because limitations relating to the size of the package were
not sufficient to patentability distinguish over the prior art). *In re Rinehart*,

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531 F. 2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F. 2d at 1053, 189 USPQ at 148). Further, in *Gardner v. TEC Systems, Inc.*, 725 F. 2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made of (sic, to) modify the method of implementing a barrier to fluid of DAHLANDER in view of BORLAND by replacing the adhesive (waterproof adhesive, such as asphalt layer 4 – see page 1, second column, lines 28-29) of DAHLANDER in view of BORLAND with the Portland cement-based adhesive as taught by BEAN ET AL. in order to form a bond between the concrete and metal that does not degrade in the presence of moisture and alkalinity, and to make the adhesive layer 6 mm (0.25 inches) thick would have constituted a further obvious expedient to one having ordinary skill in the art at the time the invention was made since it is well founded that merely changing sealant taught by SCHIRMER in order to provide a waterproof joint that will remain so even after being subjected to numerous freeze and thaw cycles (see col. 1, lines 16-25).

Applicants have amended Claim 1 upon which Claim 5 depends to clarify a purpose of Applicants' invention that can not be met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander* or *Bean et al.*, thus mooted any argument regarding Claim 5 as applied to previously amended Claim 1. Applicants note that the best use of their invention is for flooring in a temperature controlled environment so that any discussion of freeze/thaw cycles is moot. Further, Applicants are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Examiner further states:

As to claim 8, DAHLANDER in view of BORLAND and SCHIRMER discloses the method of claim 7 as discussed above and SCHIRMER also discloses that a room temperature vulcanizing (RTV) sealant (see col. 3, lines 18-49) is employed as said at least one sealant.

Applicants have amended Claim 1 upon which Claim 7 depends, Claim 8 depending on Claim 7, to clarify a purpose of Applicants' invention that can not be

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met in the cost effective and straightforward method of Applicants' invention by combining *Borland* with *Dahlander* or *Bean et al.*, thus mooted any argument regarding Claim 5 as applied to previously amended Claim 1. Applicants note that there is no discussion of Claim 7 in the present Office Action. Further, Applicants
5 are free to utilize the concept of claim differentiation with each independent claim as Applicants see fit.

Under "Response to Arguments" of the office action, Examiner states:

Applicants' arguments filed 14 June 2006 have been fully considered but they are moot in view of the new grounds of rejections.

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Applicants note that new grounds of rejection do not apply to every argument, e.g., Claim 8 has the same grounds as in a prior Office Action.

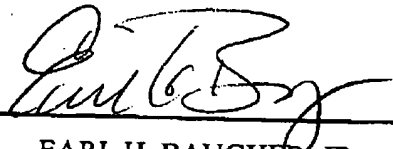
No new matter has been entered via this amendment. In view of the foregoing,
15 Applicants respectfully request that the subject application be passed to issue as amended hereby with currently amended Claims 1, 3, and 5, previously amended Claims 2, 7, 9 and 12, and original Claim 8, all claims now being in proper condition for allowance.

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Respectfully Submitted,

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